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ABSTRACTS

It is generally accepted that the presence of ochratoxin A (OTA) in wines is related with the type of wine and with the region of its origin. Red wines from the Mediterranean zone are described as the ones with higher OTA contamination levels. In order to study the filamentous fungi which are presumptively responsible for wine grapes OTA contamination, a survey was carried out in 11 vineyards located at northwest (3 vineyards), northeast (3 vineyards) and south (5 vineyards) regions of Portugal. From sowing to harvesting period, a total of 1650 berries were sampled by plating method. Out of 370 aspergilli and 300 penicillia isolated strains, only 340 aspergilli and none penicillia are OTA producers described species. From those, the black aspergilli were the predominant ones, namely A. niger (293), A. carbonarius (39) and, A. foetidus (1). All aspergilli strains were tested in vitro for OTA production and all of them were preserved in the MUM culture collection. All A. carbonarius and 4% of the A. niger studied were OTA producers. The highest occurrence of ochratoxigenic strains in the wine grapes was observed at the harvest period. Ochratoxigenic black aspergilli were found mainly in the warmer and drier regions, i.e., A. carbonarius in the south region and A. niger in the northeast region. On the other hand, the northwest region, with high precipitation values, exhibited the lowest occurrence of Aspergillus and ochratoxigenic strains. These results may be of importance to establish the risk of OTA wine contamination with its origin. Furthermore, to clarify if wine grapes could contribute to wine OTA contamination, grapes collected at harvest period were analysed for OTA. It was detected OTA at a level lower than 0.01 mg/l in samples from three vineyards. These data will be presented and discussed. The authors acknowledge the financial support of Wine-Ochra Risk European project (QLK1-CT-2001-01761); R. Serra was supported by grant SFRH/BD/1436/2000 from Fundação para a Ciência e Tecnologia.